



CREA2.txt
SEQUENCE LISTING

<110> Societé des Produits Nestlé

<120> creA-gene

<130> 80050

<140>

<141>

<150> 99 104 923.0

<151> 1999-03-11

<160> 2

<170> PatentIn Ver. 2.1

<210> 1

<211> 4238

<212> DNA

<213> Aspergillus oryzae

<400> 1

```
ctgcagttcc agtttctacc ccgtaaattcc ctatcaactt agtccgcccc acattctttt 60
ttttttttcc tttttttttc gctccccggtc agagtgatag tgggatttat tacacaccgt 120
gcgtgggtcga agaacgacac ggaagaagcc ccggaagacg ccttctctag gcaacaaatg 180
attgtactct tatgatactc aatacggtag aaaatagaga attgagatac gaaagctgac 240
tcatcagaac agaataaggg gaatttttga ttagcaaata acaataataa ttatacaaaa 300
aaacaaataa aaaaatttag gggactcccc acccgctgta atcctgggtg tatctcaaag 360
caaagcaggc gatctggggg gagcacgttc tttttttttc ttttctcttt tttctatttt 420
tttttttttt ttatatttag gtctatgcct ttttttttct ttttcttttt tttttttttt 480
tttgcccccc gataattctc cccacacata ggacataact tttttttttt tccttccact 540
cccttcaagg tctccgattc cgataacccc ctctaccagt tcgccctgcc tttttctctc 600
ccctcccccg aagctccatt tctctcttct tccccctcat tcctcattct tcctcttccg 660
tatttccttt atatgctcct atccccagac catttctcca gatttctctc tctttccctt 720
ctctcccttt cgacaaattg ttgcttgact acatccatct cgggttacct acttacagta 780
ccaattccgg atatactcta tcccacccat caccacattc cataacagcg ccctttcatt 840
gggaaagtca ctcttccttg aaattgggta catcgcgga catcgtaact tctttaatcg 900
caaggcttgt gatactcttg cgggtgctcg tcatcaacta gtactttgcc aagagcaagt 960
ctccgtcttg tcgggtgggt atcgactctc cccgatttac ctaccctgtg tgcgacgaat 1020
cctgattcgc ctccggctcg cagcccttcc gagcttccct taagtacagg ctctgtcccc 1080
tctttagctg cactcctcgg tgctagggta ggacgagtca catgccacca ccggcttctt 1140
cagtggattt caccaactct ctgaacccct agaataacga gactgggtct gcaccttcca 1200
cgccagtggg tagctccaag gctccctcta ccccgctccag tactcagtcc aactctacca 1260
tggcctcgtc tgttagctta ctaccgcccc tcatgaaggg tgctcgctcc gcaacggaag 1320
aagcgcgcca ggatcttccc cgtccataca agtgtcccc gtgtgatcgc gccttccatc 1380
gtttggagca ccagaccaga catattcgca cacatacggg tgaaaagcca cagccttgcc 1440
agttcccggg ctgcacaaaa cgcttttagt gctctgacga gctgacacgc cactcaagaa 1500
ttcacaacaa ccccaactcc aggcggagta acaaggcaca tctggccgct gccgctgccc 1560
ctgccgtcgc cggacaagag aatgcaatgg taaatgtgac caacgcgggc tcgttgatgc 1620
ccccgcccac aaagcctatg acccgctctg cgctgtctc tcagggttga tctccggatg 1680
tctccccctc gcactccttc tcgaactatg ccggtcacat gcgttccaat ctgggacatc 1740
atgctcgcaa caccgagcgg gcgtcctcgg gaatggatat caatctactt gccaccgctg 1800
catctcaggt tgagcgtgat gaacaacatt ttgggttcca cgctggtcca cgtaatcacc 1860
atttgttcgc ctgcggtcac cacccggtc gtggcctgcc ttccctttca gcgtacgcca 1920
tctcgcacag catgagccgt tctcactttc acgaggacga ggatgggtac actcatcgcg 1980
tcaagcgtc aaggcctaac tcaccaaact cgaccgctcc gtcctcaccg actttctctc 2040
acgactctct tcccccaacg ccagaccaca ctccgttggc aaccctgct cattcgccac 2100
gcttgagggtc attgggatct agcgaactcc accttcttcc gattcgccat ctgtccctcc 2160
atcacacccc tgcccttgct ccaatggagc cccagccgga aggccccaac tattacagtc 2220
ccagccagtc tcatggctcc acaatcagcg atatcatgtc cagacccgag ggaacacagc 2280
gtaaactgcc cgttccacag gttcccaagg tcgcggtgca agatatgctg aaccccgagc 2340
```

CREA2.txt

```

ctgggttttc gtcggtttcc tcacgcacga ataactctgt cgcaggaaat gatttggcag 2400
aacgtttcta gcctggtgcg gctgcgaaac cttttcaatg tataaagttt tgggctcaaa 2460
aaaaattctt gactgtcata cgcgctacga aacgaataga ctttgtgcat ttacagtgcg 2520
tgggtcatgg gcatccttgg tgtcggctgg ctttctttgc ttactttggt cgagtatact 2580
tttgcgaggg gtccatagtg atagacgggt gggatattct tgtggccttt tccgtgcttg 2640
ttcgattctc ccttttcgct ctcttgaaa aatacctttc ttatcctata accatttggt 2700
tcattatccc aatgggaatt ggctctacag ctcttattca ttttgtctac tcctctcctg 2760
aggcccagtc ccctgataat tccgggctct accatataca tttcatttcg actatgtcag 2820
tttcgccttc gatttagacc tcgagcagga cgagagggtt ccgaaagaaa atacaaacaa 2880
aaattatagt aatctgcgtt tactttggca taatacagta gtcattagtt gaggtaggca 2940
taatctggat gtctaaccat cacttgccct aacctcctac catctgctgc tagtatttgt 3000
cttaccgcaa acccaattca acgagataga tggattgacg aataacaatt tgttgtccag 3060
cgacatgcat gatacatgcg tacgtacata cactaatagt agtcacagac cagttcatca 3120
catcctggtc tcgggtattc agatacggaa atgcgtaaga ttggaagggt ctaagaaaaa 3180
gcaagaaaaa aggaaaaagt aacactggct ggcgctctct ttccatctct gatcaatggt 3240
attgttcgtc actcagctgt ggacgtggct ccagtcaagt tgtgaattat gatagggtat 3300
tgttgacttg acaagttgat cttgatggaa tcaaatcttc tccccgccag attctgacgc 3360
ttgaggctct cggatcgaat gaacaacttt tcgcaccaca tcaaccggtt gccgcgtgat 3420
gctggagaca aaccgaccca aacgtcacgg tcacacggag gatacgtttg ctagagccag 3480
ctgatacccc aagagacaag aaggtaaagg tcgaaaaaat cttttcaata agatggcatc 3540
ttccccacac caacccttaa ccattctcct ttcaagctgt gttgccccgc tttgggtgcat 3600
gggcttgggt agtgcggtcg caaaactact aatttaatga ccgactgctg ctgctttttc 3660
actcgccgct cacggactaa gcatgtggga acaggatcgc cccgtcacta tticagatcg 3720
tgtcgtatca aggtgttcgc ccggtgctgc tggcacgaac gccggccatc caagatcatt 3780
gttctcattc aaaccgggcg gcttacgtct agccgcggac gtaagcacga agagtgtgtg 3840
tagtggtggg agtgaagccg ttgccgaaac catgccgtcc tccacggccg tcccgtcgtt 3900
atcaagcgac gctgcctccg ctccatcctc atcagcgggt gtatctcttg agacaagatg 3960
ggcgggaagg ctcaccggcc aggagatatt agaagacgat ggaacgggcg cgctcgtcgt 4020
cccgccgtcc cgccctgctc ggcaatatca tcaccatacc tatatctgtc tgttctatat 4080
cttagattgt caccacacct tcgacgatgt cgagcaatgg aagactcacg ttctgagcca 4140
cttccgaacc cacgaaccac cgcaacagc cccgatgccct ctatgtccgg gtgagcgggt 4200
cagcgacacc cccgaacaga aaggatggga tcgcatgc 4238

```

<210> 2
 <211> 431
 <212> PRT
 <213> *Aspergillus oryzae*

<400> 2
 Met Pro Pro Pro Ala Ser Ser Val Asp Phe Thr Asn Leu Leu Asn Pro
 1 5 10 15
 Gln Asn Asn Glu Thr Gly Ser Ala Pro Ser Thr Pro Val Asp Ser Ser
 20 25 30
 Lys Ala Pro Ser Thr Pro Ser Ser Thr Gln Ser Asn Ser Thr Met Ala
 35 40 45
 Ser Ser Val Ser Leu Leu Pro Pro Leu Met Lys Gly Ala Arg Pro Ala
 50 55 60
 Thr Glu Glu Ala Arg Gln Asp Leu Pro Arg Pro Tyr Lys Cys Pro Leu
 65 70 75 80
 Cys Asp Arg Ala Phe His Arg Leu Glu His Gln Thr Arg His Ile Arg
 85 90 95
 Thr His Thr Gly Glu Lys Pro His Ala Cys Gln Phe Pro Gly Cys Thr
 100 105 110
 Lys Arg Phe Ser Arg Ser Asp Glu Leu Thr Arg His Ser Arg Ile His
 115 120 125

CREA2.txt

Asn Asn Pro Asn Ser Arg Arg Ser Asn Lys Ala His Leu Ala Ala Ala
 130 135 140
 Ala Ala Ala Ala Ala Ala Gly Gln Gly Gln Glu Asn Ala Met Val Asn
 145 150 155 160
 Val Thr Asn Ala Gly Ser Leu Met Pro Pro Thr Lys Pro Met Thr
 165 170 175
 Arg Ser Ala Pro Val Ser Gln Val Gly Ser Pro Asp Val Ser Pro Pro
 180 185 190
 His Ser Phe Ser Asn Tyr Ala Gly His Met Arg Ser Asn Leu Gly Pro
 195 200 205
 Tyr Ala Arg Asn Thr Glu Arg Ala Ser Ser Gly Met Asp Ile Asn Leu
 210 215 220
 Leu Ala Thr Ala Ala Ser Gln Val Glu Arg Asp Glu Gln His Phe Gly
 225 230 235 240
 Phe His Ala Gly Pro Arg Asn His His Leu Phe Ala Ser Arg His His
 245 250 255
 Thr Gly Arg Gly Leu Pro Ser Leu Ser Ala Tyr Ala Ile Ser His Ser
 260 265 270
 Met Ser Arg Ser His Phe His Glu Asp Glu Asp Gly Tyr Thr His Arg
 275 280 285
 Val Lys Arg Ser Arg Pro Asn Ser Pro Asn Ser Thr Ala Pro Ser Ser
 290 295 300
 Pro Thr Phe Ser His Asp Ser Leu Ser Pro Thr Pro Asp His Thr Pro
 305 310 315 320
 Leu Ala Thr Pro Ala His Ser Pro Arg Leu Arg Ser Leu Gly Ser Ser
 325 330 335
 Glu Leu His Leu Pro Ser Ile Arg His Leu Ser Leu His His Thr Pro
 340 345 350
 Ala Leu Ala Pro Met Glu Pro Gln Pro Glu Gly Pro Asn Tyr Tyr Ser
 355 360 365
 Pro Ser Gln Ser His Gly Pro Thr Ile Ser Asp Ile Met Ser Arg Pro
 370 375 380
 Asp Gly Thr Gln Arg Lys Leu Pro Val Pro Gln Val Pro Lys Val Ala
 385 390 395 400
 Val Gln Asp Met Leu Asn Pro Ser Ala Gly Phe Ser Ser Val Ser Ser
 405 410 415
 Ser Thr Asn Asn Ser Val Ala Gly Asn Asp Leu Ala Glu Arg Phe
 420 425 430

<210> 3

<211> 29

<212> DNA

<213> Artificial Sequence

<400> 3

cttccccgtc catagtagtg tcccctgtg 29

<210> 4

<211> 29

<212> DNA

<213> Artificial Sequence

<400> 4

cacaggggac actactatgg acggggaag 29

<210> 5

<211> 6

<212> PRT

<213> consensus of CREA DNA-binding site

<400> 5

Ser Tyr Gly Arg Gly Gly
1 5